

MAMMALS
OF
LOS ANGELES COUNTY,
CALIFORNIA

by
GEORGE WILLETT

LOS ANGELES COUNTY MUSEUM SCIENCE SERIES, NO. 9

Zoology, No. 4

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GEORGE WILLETT

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This is the first publication of the Los Angeles County Museum dealing with all the known living, wild mammals of the county. In addition to listing these by vernacular and scientific names, there are included condensed descriptions, differentiating characters, and some illustrations. It is hoped that, by means of the information given here, the field observer may be able to identify the different species of the area under discussion. It must be remembered, however, that owing to the nocturnal habits of many of our mammals, some species are not often seen by the casual observer.

The classification used here is to be found in Joseph Grinnell's "Review of the Recent Mammal Fauna of California," published by the University of California in 1933. This authoritative work has also been consulted regarding the distribution of many species. Also, frequent use has been made of H. E. Anthony's "Field Book of North American Mammals," published by G. P. Putnam's Sons, New York, 1935, to aid in descriptions of some mammals with which the author was not personally sufficiently familiar.

Measurements used are: Length, from nose to end of tail vertebrae; and tail, from base to end of vertebrae (neither of these measurements includes the hair at the extremity of the tail). In the discussion of some groups, ear measurements are also used.

Specimens of most of the species listed here are either on display at the Los Angeles County Museum, or to be found in the study collections of that institution, and students are invited to make free use of this source of information.

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VIRGINIA OPOSSUM (30 inches)

POUCHED MAMMALS (Order *Marsupialia*)

OPOSSUMS (Family *Didelphiidae*)

VIRGINIA OPOSSUM (*Didelphis virginiana*). A grizzled-gray and dark brown animal, about 30 inches long, with 12 inch, *naked* tail. Introduced from southeastern United States in early part of twentieth century, and now generally distributed on Pacific slope. The only North American representative of the Order of Marsupials, a group characterized by premature birth of the young, which are matured in the abdominal pouch of the mother.



SOUTHERN CALIFORNIA MOLE (6 inches)
SOUTHERN CALIFORNIA SHREW (4 inches)

INSECTIVOROUS MAMMALS (Order *Insectivora*)

MOLES (Family *Talpidae*)

Small mammals with long, pointed nose, minute eyes and ears, *greatly enlarged fore-feet*, and velvety fur.

SOUTHERN CALIFORNIA MOLE (*Scapanus latimanus occultus*). Length 6 inches. Dark brown, mixed with gray below. Locally common on Pacific slope, from near sea level to 8000 feet in mountains. In some localities does considerable damage to lawns and gardens.

SHREWS (Family *Soricidae*)

Size very small; nose elongated; eyes and ears small, but *plainly visible*.

SOUTHERN CALIFORNIA SALT MARSH SHREW (*Sorex ornatus salicornicus*). About 4 inches long, with $1\frac{1}{2}$ inch tail; slender, with small feet and legs. *Brown* above, *gray* below. An inhabitant of coastal marshes. The shrew of Santa Catalina Island, differing slightly from the above, has been named *Sorex ornatus willetti*.

GRAY SHREW (*Notiosorex crawfordi*). Our smallest mammal (3.6 in. long). *Gray*, slightly lighter below. Not yet recorded from Los Angeles County, but undoubtedly present, as it has been taken east, west and south of us. Probably confined to valleys and foothills. Sometimes found around beehives, or wood rats' nests.



LITTLE CALIFORNIA BAT (length 3.2, wing-spread $7\frac{1}{2}$ in.)

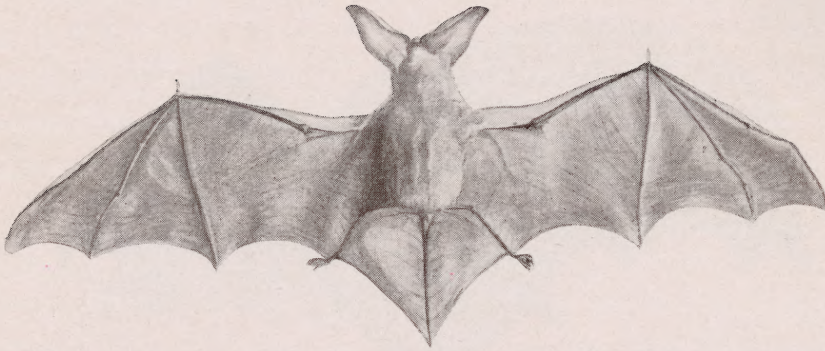
BATS (Order *Chiroptera*)

Mammals with membranous wings connecting with body and tail.

COMMON BATS (Family *Vespertilionidae*)

Membranes extending to end of tail, or nearly so. Ears not connected at base.

Of the small bats, of the genus *Myotis*, six species either have been or should be found in the county. These are: TEJON BAT (*Myotis yumanensis sociabilis*), LITTLE CALIFORNIA BAT (*M. californicus*), BLACK-NOSED BAT (*M. subulatus melanorhinus*), INTERIOR LONG-LEGGED BAT (*M. volans interior*), GOLDEN LONG-EARED BAT (*M. evotus chrysonotus*), and CALIFORNIA FRINGED BAT (*M. thysanodes*). All of these have widely separated ears, and in the first four these organs are small (about $\frac{1}{2}$ in. long). *Sociabilis* is slightly over 3 inches long, and sooty-brown in color; *californicus* is about the same length, but with smaller feet and lighter coloration; *melanorhinus* is very similar to *californicus*, but with softer fur, more silvery lower parts, more pronounced black facial mask, and somewhat differently shaped skull; *interior* is larger ($3\frac{3}{4}$ to 4 in. long), with much larger wings. *Chrysonotus* is pale buffy-yellowish, slightly smaller than the last, but with much longer ears (nearly 1 in.); and *thysanodes* is yellowish-brown, $3\frac{1}{2}$ inches long, with ear less than $\frac{3}{4}$ inch.



LUMP-NOSED BAT (length 4.2, wing-spread 10 in.)

The CANYON BATS (*Pipistrellus hesperis*) are *small* (about 3 in. long), with short, wide, *black ears*, and black nose and membranes. The typical form, a resident of desert regions, is *light gray above and below*, while the MERRIAM CANYON BAT (*Pipistrellus hesperus merriami*), found in interior mountain ranges, is much *browner* in color.

The LARGE BROWN BAT (*Eptesicus fuscus*), a widely distributed species, is about 4½ inches long, with medium-sized ears, and is brown on the back and grayish-brown below.

The two races of the LUMP-NOSED BAT (*Corynorhinus rafinesquii*), so called because of *wart-like growths on the muzzle*, are slightly over 4 inches long, with very large ears (well over an inch in length). The pale brown form (*C. r. pallescens*) is mainly a resident of the desert, while the slightly darker one (*C. r. intermedius*) is more western in its distribution. The PACIFIC PALLID BAT (*Antrozous pallidus pacificus*), somewhat longer than the last, but with slightly shorter ears, is found on the Pacific slope. It is *yellowish* or yellowish-gray, washed with brown above, lighter below.

The WESTERN RED BAT (*Lasiurus borealis teliotis*) and the HOARY BAT (*Lasiurus cinereus*) are solitary in their habits, and hang in thick foliage of trees during the day. In both of these species the membrane connecting the hind legs with the tail is *well furred above*. The RED BAT is slightly over 4 inches in length, *reddish above*, with white shoulder patch and pale underparts. The HOARY BAT, about 5½ inches long, is *mixed brown and white above* and below, with yellowish throat patch.



MEXICAN FREE-TAILED BAT (length 4, wing-spread $10\frac{1}{2}$ in.)

AMERICAN LEAF-NOSED BATS (Family *Phyllostomidae*)

CALIFORNIA LEAF-NOSED BAT (*Macrotus californicus*). Nearly 4 inches long, with large (about 1 in.), papery ears connected at base; upright, leaf-like cartilage on tip of nose; about one-fifth of tail free. Fur white basally, tipped with brown. More common on Colorado Desert, but has been taken at Chatsworth.

FREE-TAILED BATS (Family *Molossidae*)

Much of tail projecting beyond the membrane. Ears wide, and very close together.

MEXICAN FREE-TAILED BAT (*Tadarida mexicana*). Four inches long. Half the tail free. Sooty brown, paler below. Generally distributed.

CALIFORNIA MASTIFF BAT (*Eumops perotis californicus*). Our largest bat (about $6\frac{1}{2}$ in. long). Much of tail free; large, rounded, connected ears partially furred, both above and below. Mainly restricted to the Pacific slope.



RING-TAILED CAT (32 inches)

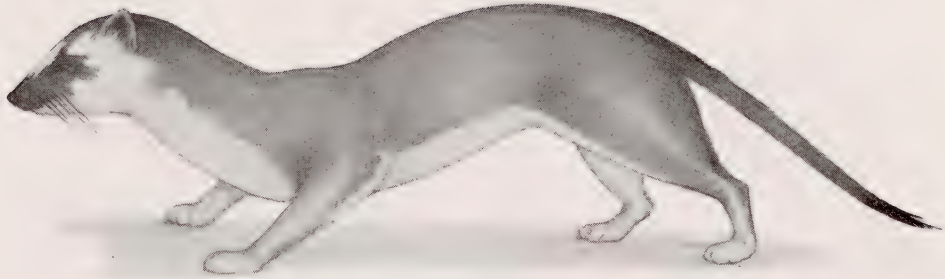
CARNIVOROUS MAMMALS (Order *Carnivora*)

RACCOONS (Family *Procyonidae*)

CALIFORNIA COON (*Procyon lotor psora*). Nearly 3 feet long, with 12 inch, bushy tail bearing from 5 to 7 dark bands. Nose slender, head broad, ears erect. Above, yellowish gray, mixed with black; below, brown and gray; black band across forehead and eyes. Found along streams in foothill and mountain regions.

RING-TAILED CATS (Family *Bassariscidae*)

SAN DIEGO RING-TAILED CAT (*Bassariscus astutus octavus*). Smaller and more slender than the coon, with shorter and softer hair, and longer tail. Length 32 inches, tail 17 inches. Mixed grayish-brown above, buffy white below. Black in front of eyes and on sides of nose. Tail brownish-black, with 7 (rarely 8) white bands (confluent below). Foothill and mountain canyons, up to 5000 feet.



SOUTHERN CALIFORNIA WEASEL (15-18 inches)

WEASELS, SKUNKS, etc. (Family *Mustelidae*)

SOUTHERN CALIFORNIA WEASEL (*Mustela frenata latirostris*). Length 15-18 inches, tail $5\frac{1}{2}$ - $6\frac{1}{2}$ inches. *Very slender*. Ears short and rounded. Yellowish-brown above (head darker), duller in winter; orange buff below; chin, middle of forehead, and band in front of ears whitish; *tip of tail black*. Pacific slope, from coast to foothills.



BADGER

CALIFORNIA BADGER (*Taxidea taxus neglecta*). Length 24-29 inches; *tail short* (5-7 in.). Upper parts grizzled gray and dusky; throat, stripe below and back of eye white, and *white stripe in center of head*, the latter often running to shoulders and sometimes to rump; belly buffy, usually white in center; tail brown; feet and legs usually black. Formerly on plains and meadows, from near sea level to higher mountains; now scarce or absent in settled districts. The MEXICAN BADGER (*Taxidea taxus berlandieri*), said to be the form occurring on our deserts, is very similar.

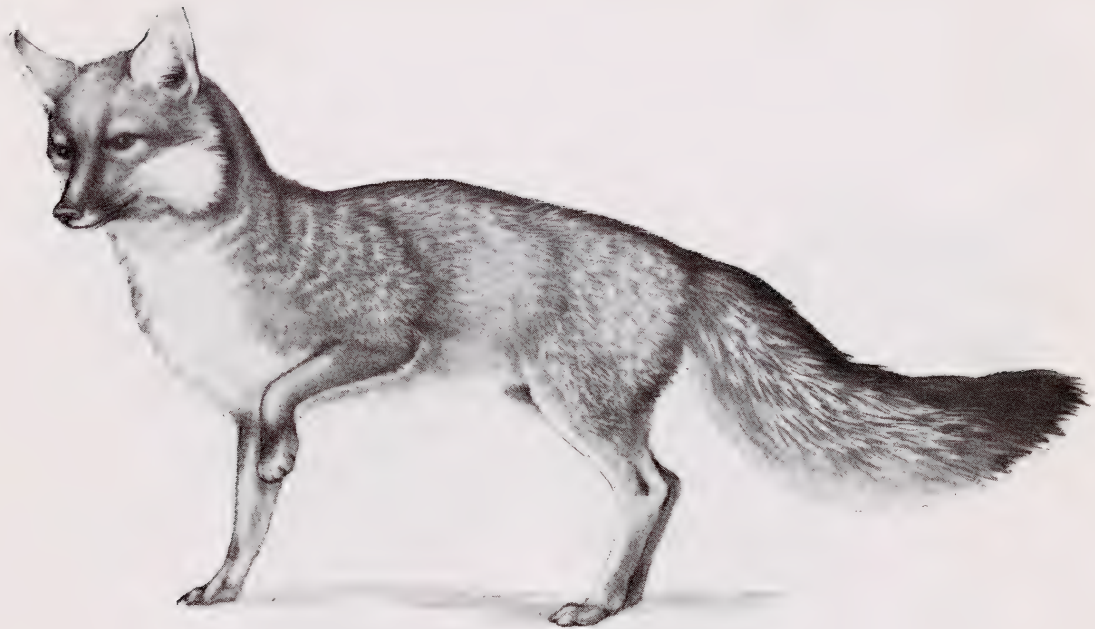


SPOTTED SKUNK (16-19 inches)

STRIPED SKUNK (25-30 inches)

SAN DIEGO SPOTTED SKUNK (*Spilogale gracilis microrhina*). Length 16-19 inches. Black, with white tip of tail and spot on center of forehead, and 4 interrupted white stripes running from ears to rump. From western parts of desert to sea coast, below 4500 feet.

SOUTHERN CALIFORNIA STRIPED SKUNK (*Mephitis mephitis holzneri*). Length 25-30 inches. Black, with broad white stripe starting at ears, dividing on back and running down sides of tail; narrow white line down center of crown, and sometimes short white lines on lower parts between forelegs. Most of county, below 6500 feet.



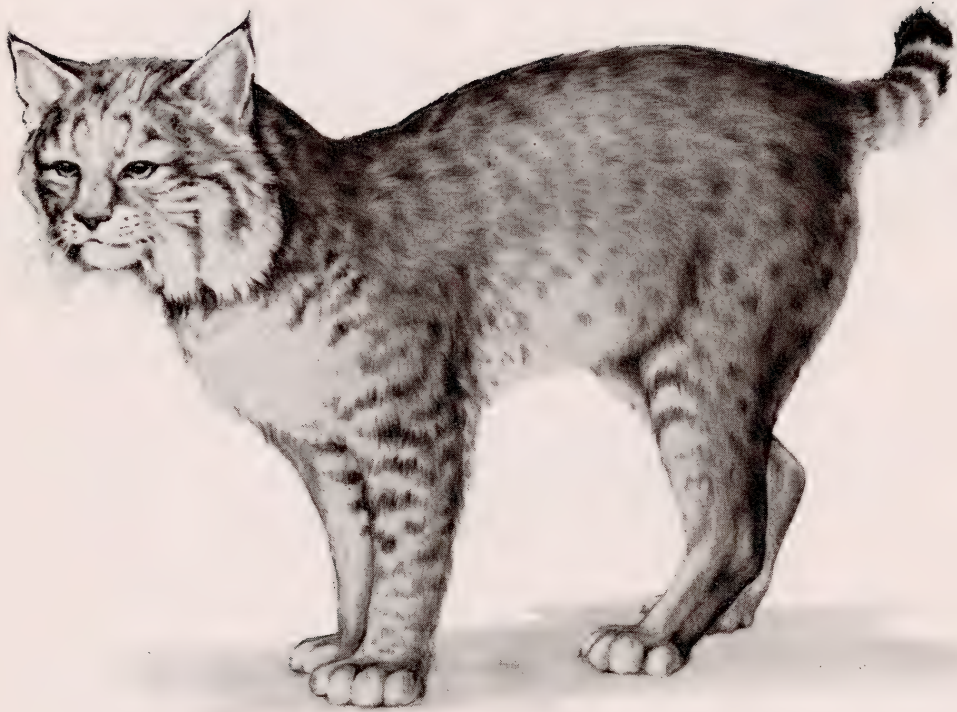
CALIFORNIA GRAY FOX (38 inches)

FOXES AND COYOTES (Family *Canidae*)

LONG-EARED KIT FOX (*Vulpes macrotis*). Very small (length 30 in., tail 11.6 in.), and *light colored*. Upper parts pale grayish buff; under parts white and buff; tail mostly gray, with brown tip. Formerly ranged in open country from Riverside County to San Fernando Valley. Generally regarded as extinct, but the Los Angeles County Museum has portions of a skin of a kit fox taken in the latter locality about 1940.

CALIFORNIA GRAY FOX (*Urocyon cinereoargenteus californicus*). Longer (length 38 in., tail 15 in.), and *much darker*. Above grizzled gray and black, lighter on sides; ears, sides of neck, upper parts of legs, and sides of belly marked with reddish; chin and nose blackish; middle of belly white. Pacific slope, locally up to 8000 feet. The fox of Santa Catalina Island (*Urocyon littoralis catalinae*) is very similar to the last species in color, but *much smaller* (length 30 in., tail 11.4 in.).

VALLEY COYOTE (*Canis latrans ochropus*). *Larger* (length 42-45 in.), with *relatively shorter tail* (12 in.). At a distance, looks much like a shepherd dog. Generally distributed from mountains to coast. The DESERT COYOTE (*Canis latrans estor*) is slightly smaller, and *paler* in coloration.

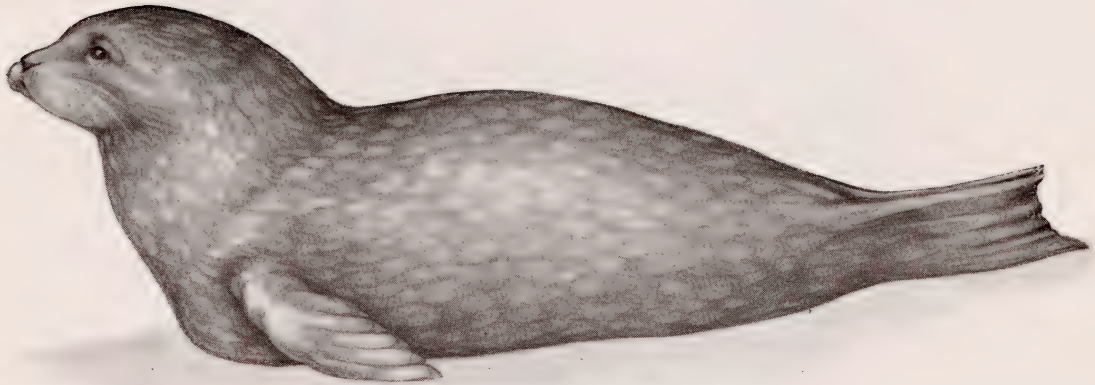


CALIFORNIA WILDCAT (32-34 inches)

CATS (Family *Felidae*)

CALIFORNIA MOUNTAIN LION (*Felis concolor*). Length $5\frac{1}{2}$ to 7 feet, with 25 to 30 inch tail. Yellowish-brown above, under parts paler; tip of tail blackish. Occurs in mountainous regions; much less plentiful than formerly.

CALIFORNIA WILDCAT (*Lynx rufus californicus*). Much smaller (32-34 in. long), with very short tail (6-7 in.). Mainly found in mountains and foothills. The DESERT WILDCAT (*Lynx rufus baileyi*) is very similar, but paler in coloration.



HARBOR SEAL (60 inches)

FIN-FOOTED MAMMALS (Order *Pinnipedia*)

EARED SEALS (Family *Otariidae*)

External ears present; hind limbs capable of forward movement.

CALIFORNIA SEA LION (*Zalophus californianus*). Male 8 feet or more in length, female smaller. Hair short. Color varying from yellowish-brown to black. Common on the ocean. The STELLER SEA LION (*Eumetopias jubata*) may also be looked for off our coast, though no breeding colonies are known south of San Miguel and Santa Rosa islands. This animal is larger than the last species, males sometimes reaching a length of 10 feet. In *Eumetopias* the forehead is less abruptly elevated than in *Zalophus*, and the voice is more of a roar (less of a bark).

HAIR SEALS (Family *Phocidae*)

External ears absent; hind limbs extending backward like a tail.

HARBOR SEAL or LEOPARD SEAL (*Phoca richardii geronimensis*). Length about 5 feet. Pelage coarse and hairy. Color varying from gray spotted with brown, to almost black spotted with yellowish. (When the animal is wet, the spots may be inconspicuous or imperceptible). Sea coast, bays and harbors.



BEECHEY GROUND SQUIRREL (17 inches)

RODENTS (Order *Rodentia*)

SQUIRRELS, etc. (Family *Sciuridae*)

BEECHEY GROUND SQUIRREL (*Citellus beecheyi*). Length 17 inches, tail 7 inches. Upper parts mixed gray, brown, buff, and white; two light silvery bands running from neck to about middle of body; ears black in front; under parts yellowish-gray; tail mixed black, brownish-gray and white, rather fluffy. Sea shore to 8000 feet in mountains. The DESERT GROUND SQUIRREL (*Citellus beecheyi fisheri*) is slightly paler than typical *beecheyi*, and the CATALINA ISLAND GROUND SQUIRREL (*Citellus beecheyi nesioticus*) is darker and less yellowish.

MOHAVE GROUND SQUIRREL (*Citellus mohavensis*). Much smaller (length 9-10 in. tail 3 in.). Above sandy brown, hairs tipped with white; underparts white; upper side of tail with basal part like back, and terminal part darker. Locally common in the Antelope Valley region.

ANTELOPE GROUND SQUIRREL or ANTELOPE CHIPMUNK (*Ammospermophilus leucurus*). About 8 inches long, with $2\frac{1}{2}$ inch tail. Above dark brown or grayish, grizzled with white; top of head brown; shoulders and flanks cinnamon; prominent white stripe on each side, separated from white underparts by dark stripe; tail black and white terminally. Inhabits desert regions. Runs with tail above back, showing white underside.



SAN BERNARDINO CHIPMUNK (9 inches)

SAN BERNARDINO CHIPMUNK (*Eutamias quadrivittatus speciosus*). Length about 9 inches; tail $3\frac{1}{2}$ -4 inches. General color grayish; back with 5 dark stripes and 4 light ones; outer pair of light stripes broad and white; white stripes, bordered by brown, above and below eye; ear black in center, white behind; tail reddish-brown and black, with some hairs tipped with buff; lower parts gray and white. Mountains, 6500 to 10,000 feet. The MERRIAM CHIPMUNK (*Eutamias merriami*) is larger than the last (length about 10 in., tail $4\frac{1}{2}$ in.), and duller colored, and ranges lower altitudinally (below 6000 feet).

ANTHONY GRAY SQUIRREL (*Sciurus griseus anthonyi*). Our largest squirrel (length 22 in., tail 10 in.). Above gray, grizzled with white; white ring around eye; brown spot at base of ear; below white. Large, fluffy tail, black with white-tipped hairs. Foothills to 9000 feet.

WESTERN FOX SQUIRREL (*Sciurus niger rufiventer*). Slightly smaller (length 21 in., tail $9\frac{1}{2}$ in.). Color variable; usually grizzled gray, brown and blackish above; rufous below. Tail rufous, mottled with black. Introduced, probably from Mississippi Valley. Reported from several localities in San Fernando Valley region.

SAN BERNARDINO FLYING SQUIRREL (*Glaucomys sabrinus californicus*). Length 11-12 inches, tail 5-6 inches. A very soft-haired animal, brown or brownish-gray above, and whitish below, with broad folds of skin extending from wrists to ankles. Tail flat and broad. A resident of timbered mountains; not yet recorded from Los Angeles County, but probably occurs here. Nocturnal in its habits, spending its days in hollow trees.

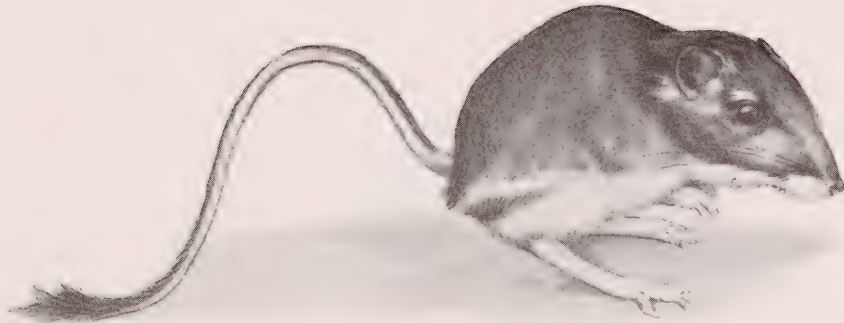


GRAPELAND POCKET GOPHER (8-10½ inches)

POCKET GOPHERS (Family *Geomyidae*)

Stockily built, ground-burrowing animals; with *long front teeth*; short, sparsely-haired tail; small, black ears; and *fur-lined pockets at sides of mouth*. Remain under ground during the day, but travel some at night. Burrows closed at entrances.

GRAPELAND POCKET GOPHER (*Thomomys bottae pallescens*). Length 8-10½ inches. Reddish-brown above, with some black-tipped hairs; buff or grayish-buff below. Pacific slope, from coast to lower mountains. The SAN GABRIEL MOUNTAIN POCKET GOPHER (*T. b. neglectus*), found in the mountains, from 5000 to 8500 feet, is slightly smaller and less reddish; and the MOHAVE POCKET GOPHER (*T. b. mohavensis*), of desert regions, is much lighter colored, being cinnamon-buff above, and light buff or whitish below.



GAMBEL KANGAROO RAT (11½ inches)

KANGAROO RATS, POCKET MICE (Family *Heteromyidae*)

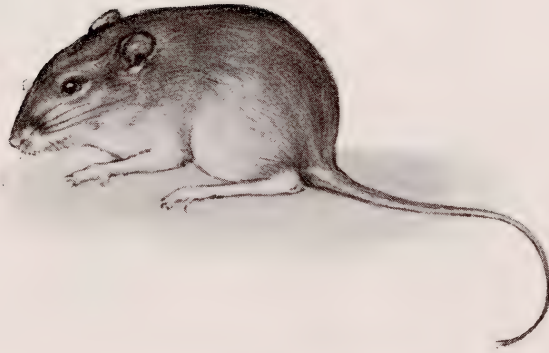
The members of this family may be distinguished from true mice and rats by the food pockets on each side of mouth, and lengthened hind legs. They are mainly seed eaters, and are able to exist for long periods without drinking. Kangaroo Rats are much larger than Pocket Mice, with proportionately larger and flatter heads, larger hind feet, and long, tufted tails. They travel at night, progressing on hind feet alone, the small forelegs not touching the ground. The following species are known to occur in the county.

GAMBEL KANGAROO RAT (*Dipodomys agilis*). Length about 11½ inches, tail 7-7½ inches. *Hind foot with 5 toes* (1 very small). Back brown, blackish in center; sides buffy; lower parts white; ear blackish-brown, with white spot at anterior base; *tail blackish* above and below, with *narrow white stripes* on sides; black spot at base of whiskers. Pacific slope, from sea level to 7500 feet. Range now much restricted, because of settling up of county by man.

MOHAVE KANGAROO RAT (*Dipodomys mohavensis*). Similar to last in size, and in possession of *5 toes*, but much lighter in color. Upper parts *ochraceous buff*; tail with more white than black. Mohave Desert.

MERRIAM KANGAROO RAT (*Dipodomys merriami*). Similar to the last in general coloration, but *smaller* (length about 10 in., tail about 6 in.), and with only *4 toes*. Desert.

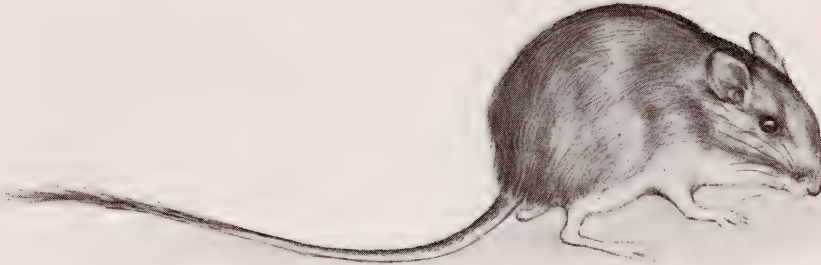
DESERT KANGAROO RAT (*Dipodomys deserti*). Our *largest* member of the group (length 13-14½ in., tail about 8 in.). *Toes 4*. Locally common on desert, particularly in sand-hill regions.



TEJON POCKET MOUSE (5 inches)

TEJON POCKET MOUSE (*Perognathus longimembris*). The three races of this species found in Los Angeles County are among the smallest of our mammals, usually being *less than 5 inches in length*, with $2\frac{1}{4}$ to 3 inch tail. Pelage soft and brown, mixed with glossy black and buff above; sides buffy; lower parts white. The typical form, *lightest colored* (buffiest) of the three, occurs in the northern part of the county (Elizabeth Lake and Gorman to Antelope Valley); the SHORT-NOSED POCKET MOUSE, (*P. l. brevinasus*), *darker* in color, inhabits interior valleys of coastal slope, northwest to San Fernando; and the CANTWELL POCKET MOUSE (*P. l. cantwelli*), *darkest and smallest*, is found along the coast, from Wilmington to Playa del Rey.

McKITTRICK POCKET MOUSE (*Perognathus inornatus neglectus*). Slightly larger than last (length over 6, tail over 3 in.), with *white spot at base of ear*. Northern part of county (Elizabeth Lake and Gorman to Antelope Valley).

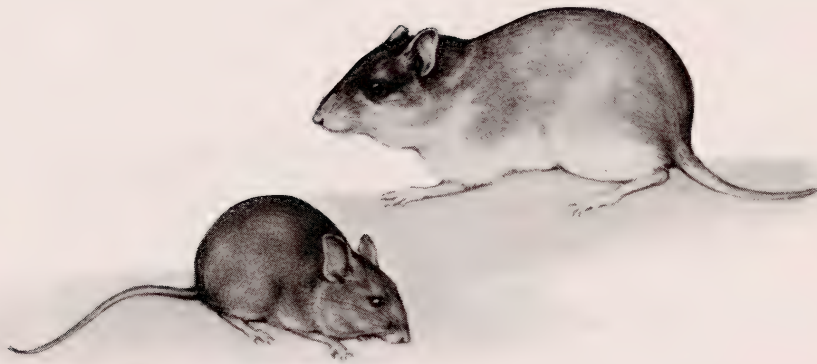


ALLEN POCKET MOUSE (8-9 inches)

MOUNT PINOS POCKET MOUSE (*Perognathus alticolus inexpectatus*). Still larger (length $7\frac{1}{2}$, tail over $3\frac{1}{2}$ in.), and darker in color, particularly on rump. Northern foothills (Quail Lake and Elizabeth Lake to Mount Pinos), up to 6000 feet.

STEPHENS POCKET MOUSE (*Perognathus penicillatus stephensi*). Length $6\frac{1}{4}$ to $7\frac{1}{4}$ inches, tail $3\frac{1}{4}$ to $4\frac{1}{4}$ inches. Very light colored; pinkish buff above, white below. Tail well furred, and tufted at end. Mohave Desert. Apparently rare.

ALLEN POCKET MOUSE (*Perognathus californicus dispar*). Very large (length 8-9 in., tail $4\frac{1}{2}$ -5 in.). Pelage harsh, spines on rump and flanks. Above brown, mixed with black; sides buffy; below white; tail black above, white below, tufted at tip. Chaparral-covered hills of coastal slope. Very similar, but averaging lighter in color and slightly larger (length 9 in., tail over 5 in.), is the SAN BERNARDINO MOUNTAIN POCKET MOUSE (*P. c. bernardinus*), an inhabitant of the mountains up to at least 6860 feet (Swartout Valley).



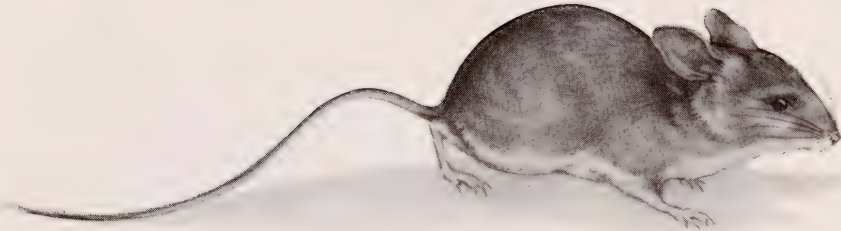
CALIFORNIA HARVEST MOUSE (5-6 inches) RAMONA GRASSHOPPER MOUSE (5½ in.)

NATIVE RATS AND MICE (Family *Cricetidae*)

Tail more or less hairy. Young more gray, less brown than adults. Some of the mice in this group are difficult to differentiate by means of external characters, much of the classification being founded on skull and teeth differences.

RAMONA GRASSHOPPER MOUSE (*Onychomys torridus ramona*). Length 5½ inches, tail 2 inches. A sturdily built mouse, with comparatively *short, thick tail*. *Sharply bicolored*, white below and brown above; darkest on middle of back. Pacific slope (usually in sandy localities), from near sea level to 3000 feet. The DESERT GRASSHOPPER MOUSE (*O. t. pulcher*) is about the same size as the last, but much *lighter colored*, adults being pinkish cinnamon above. These animals are nocturnal, and their food is principally insects, though other mice are eaten, as well as some vegetable matter.

DESERT HARVEST MOUSE (*Reithrodontomys megalotis*). A small, *long-tailed* mouse (length 5-5.8 in., tail 2½-3 in.), with rather large ears, and *upper front teeth longitudinally grooved*. Above buffy, mixed with brown; below white, with base of hairs gray. Common on deserts, within reach of water. The CALIFORNIA HARVEST MOUSE (*R. m. longicaudus*), of the Pacific slope, from the lowlands to 6000 feet in the mountains, is *darker* in color, and with tail averaging somewhat longer; and the STEPHENS HARVEST MOUSE (*R. m. limicola*), of the coastal salt marshes, is still darker, though only slightly so. The CATALINA ISLAND HARVEST MOUSE (*R. catalinae*) is similar to *longicaudus* in color, but *larger* (length 6½-7 in., tail 3½-4 in.).



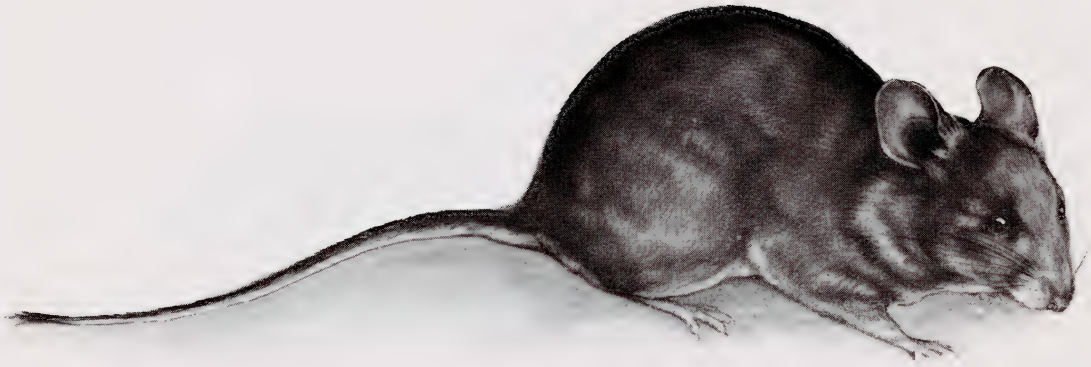
PARASITIC MOUSE (9-10 inches)

SOUTHERN PARASITIC MOUSE (*Peromyscus californicus insignis*). Our largest mouse (length 9-10 in., tail 5-5½ in.). Above brown mixed with black; below white, hairs gray at base. Chaparral-covered slopes of coast district, from near sea level up to, exceptionally, 8000 feet in mountains. Derives its name from its habit of sometimes living in or about brush nests of wood rats.

DULZURA WHITE-FOOTED MOUSE (*Peromyscus eremicus fraterculus*). Much smaller (length 7-8 in., tail 4-4½ in.). Above brown mixed with black; ears blackish; below grayish white; adults with small, rufous spot on breast; tail sparsely haired, *not distinctly bicolored*. Inhabits sandy ground, from near coast up to at least 3000 feet.

ROWLEY WHITE-FOOTED MOUSE (*Peromyscus boylii rowleyi*). Similar to last in size, but *lighter colored* (less black above), with browner ears, and *tail distinctly bicolored* and more hairy. Dry slopes of hills and mountains, up to above 7000 feet.

GAMBEL WHITE-FOOTED MOUSE (*Peromyscus maniculatus gambeli*). Similar to last in color, but *ears blacker*; size considerably smaller (length 6-7 in.), with conspicuously *shorter tail* (2½-3½ in.), the latter *distinctly bicolored*. Our most wide-spread native mouse, ranging from sea level to mountain tops, on all sorts of ground. Identical, except for *lighter color*, is the SONORAN WHITE-FOOTED MOUSE (*P. m. sonoriensis*), found on the desert side of the mountains. Occurring on Santa Catalina Island is the CATALINA WHITE-FOOTED MOUSE (*P. m. catalinae*), differing from *gambeli* in slightly darker color and larger average size.

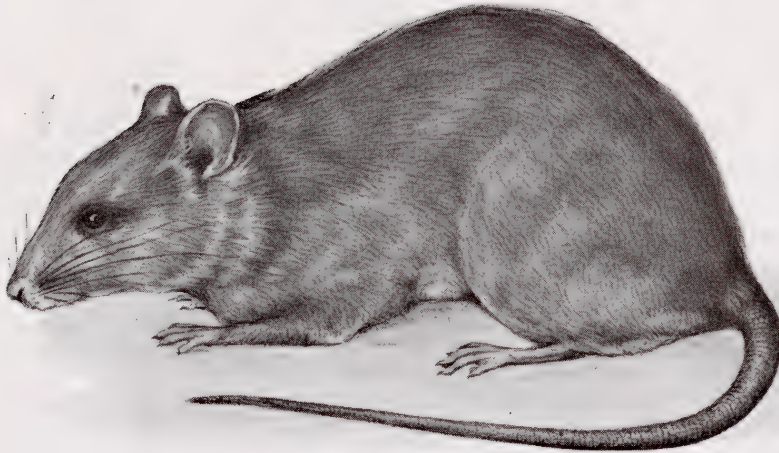


SAN DIEGO WOOD RAT (14-15 inches)

DESERT WOOD RAT or TRADE RAT (*Neotoma lepida*). *Small* for a Wood Rat (length 11-11½ in., tail 4¾-5½ in.). Above buff, sprinkled with blackish; sides pinkish buff; below white, most of hairs gray at base, but pelage on throat *white basally*. Tail well haired. Mohave Desert. The coastal representative of this species is the INTERMEDIATE WOOD RAT (*N. l. intermedia*). This race is larger (length 12½-13½ in., tail about 6 in.), browner above, and with white pelage of throat *gray basally*. Pacific slope from near sea level up to at least 5000 feet.

MOHAVE WOOD RAT (*Neotoma fuscipes mohavensis*). Much *larger* than the last two (length 14¾-15½ in., tail 6¼-7¼ in.). Browner (less buffy) above; pelage of throat white basally. Mohave Desert. The SAN DIEGO WOOD RAT (*N. f. macrotis*) is about the same size as *mohavensis*, with the same white throat, but is *much darker above*, the brown on middle of back being well mixed with black. Brushy regions of Pacific slope, from near sea level to above 6000 feet.

SOUTHERN CALIFORNIA MEADOW MOUSE (*Microtus californicus sanctidiegi*). Length 7½-8 inches, tail 2-2¾ inches. A *heavy-bodied* mouse, with comparatively *short tail*; broad, rounded ears; and long, *soft pelage*. Brown, mixed with black above; gray below. To be found around fresh water marshes and damp, grassy ground, from near sea level up to 9000 feet in mountains. The STEPHENS MEADOW MOUSE (*M. c. stephensi*), inhabiting coastal salt marshes, is similar to *sanctidiegi*, but darker in color.



NORWAY RAT (15-16 inches)

OLD WORLD RATS AND MICE (Family *Muridae*)

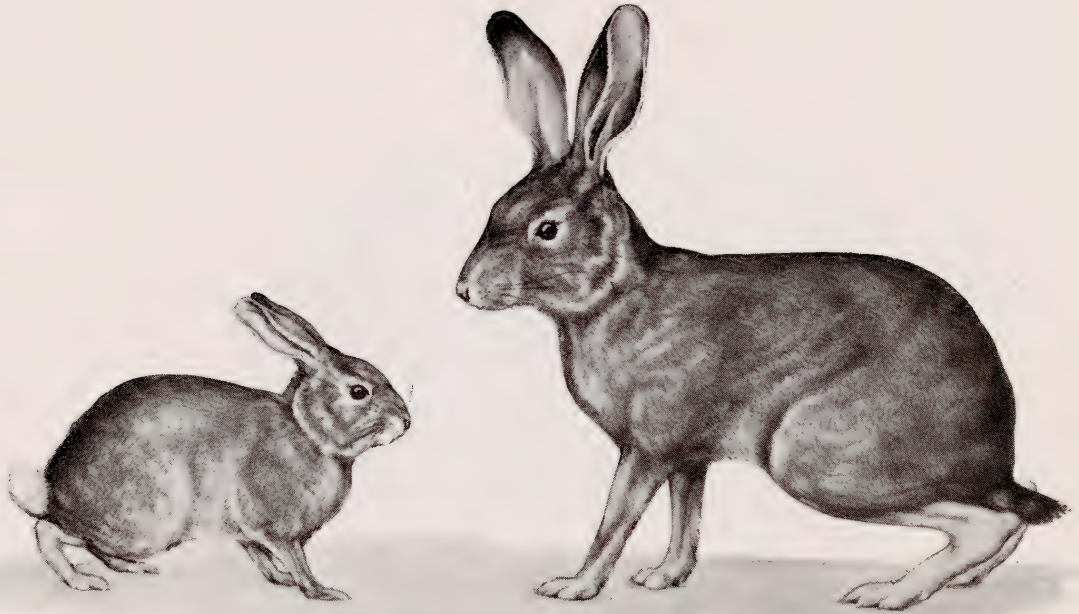
Tail long, very sparsely haired. Introduced from Old World.

BLACK RAT (*Rattus rattus*). Length 15-17 inches, tail 8-9 inches. *Above black*, with a few silvery hairs; below gray. Pacific slope, mostly in inhabited sections.

ROOF RAT (*Rattus rattus alexandrinus*). About the same size as last, but much *lighter* in color. Brown above; *white or creamy below*. Range similar.

NORWAY RAT (*Rattus norvegicus*). *Heavier*, with shorter tail (7-8 in.). *Reddish-brown above; gray below*. Generally distributed throughout inhabited regions.

HOUSE MOUSE (*Mus musculus*). Length 6-7 inches; tail 3-3½ inches. Above brown mixed with black, or plain brown; below gray or grayish-brown. *No great contrast between upper and lower parts*. Generally distributed in and around settled areas.



SAN DIEGO COTTONTAIL (16 inches) SAN DIEGO JACK RABBIT (20-22 inches)

RABBITS AND PIKAS (Order *Lagomorpha*)

RABBITS (Family *Leporidae*)

Hind legs elongated; ears large; tail short.

SAN DIEGO JACK RABBIT (*Lepus californicus bennetti*). Length 20-22 inches; ear from notch $4\frac{1}{2}$ inches. Above pinkish buff washed with black; tips of ears and top of tail black; under parts buffy, darker on lower throat and under side of tail. Pacific slope, from near sea level to 6000 feet. The DESERT JACK RABBIT (*L. c. deserticola*) is similar to *bennetti* in size, but much lighter colored, being mottled gray on the back, and with center of belly white.

SAN DIEGO COTTONTAIL (*Sylvilagus auduboni sanctidiegi*). Much smaller than last (length 16 in., ear from notch $2\frac{1}{2}$ - $2\frac{3}{4}$ in.), with hind legs less developed. Back and crown brown mixed with black; nape bright rusty; legs buffy, throat brownish, rest of underparts white. Pacific slope, mostly below 1500 feet, but higher locally. The ARIZONA COTTONTAIL (*S. a. arizonae*), similar to the last but grayer, is common in brushy sections of the desert and on the desert side of the mountains.

SOUTHERN CALIFORNIA BRUSH RABBIT (*Sylvilagus bachmani cinerascens*). Still smaller (length $12\frac{1}{2}$ -13 in., ear from notch $2\frac{1}{4}$ in.). Tail very small, showing little white; back heavily marked with black; underparts grayish, rather than white. Chaparral-covered hills of coastal slope, from near sea level to above 6000 feet.



MULE DEER



PRONG-HORN ANTELOPE

EVEN-TOED MAMMALS (Order *Artiodactyla*)

DEER (Family *Cervidae*)

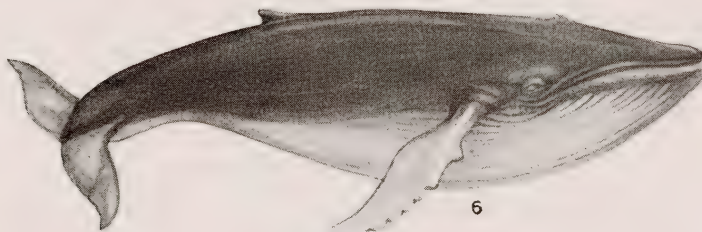
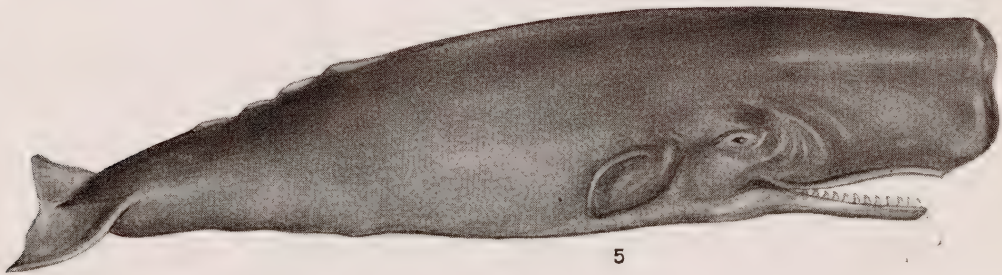
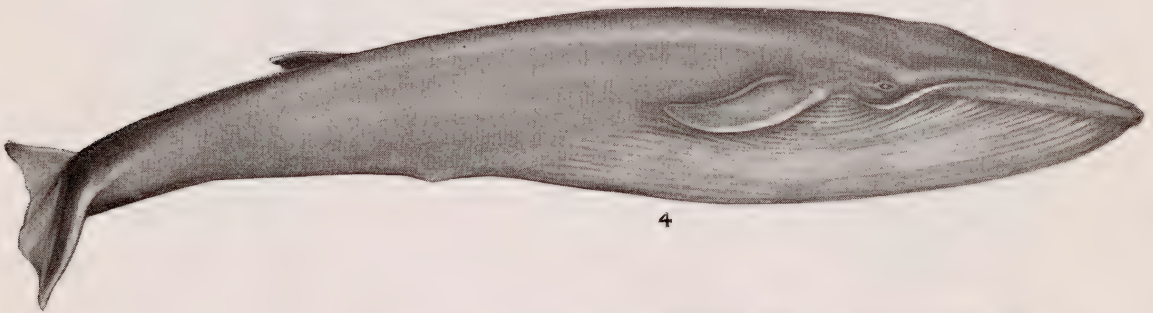
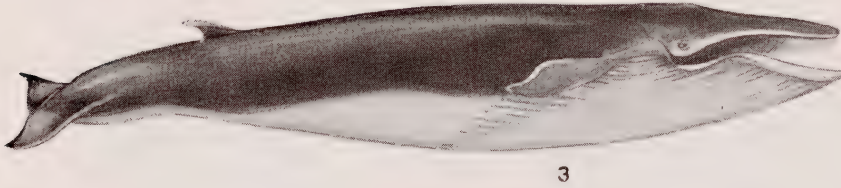
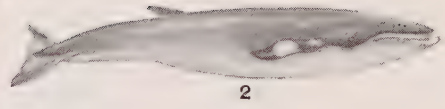
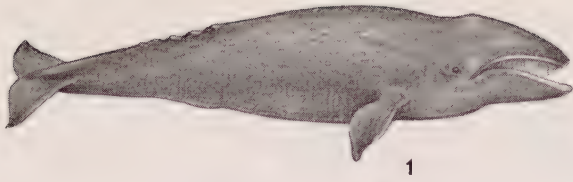
CALIFORNIA MULE DEER (*Odocoileus hemionus californicus*). The only deer known from Los Angeles County. Mostly confined to hill and mountain regions, west of the desert margin, from near sea level (as in Malibu district), up to above 9000 feet. Male with antlers which are shed in spring.

AMERICAN ANTELOPE (Family *Antilocapridae*)

PRONG-HORN ANTELOPE (*Antilocapra americana*). Horns (in both sexes) upright, slightly curved, and with one lateral prong. In contrast to Old World antelope, horns are shed annually. Formerly abundant in interior valleys, but may now be extinct in the county. Reported from Antelope Valley within the past ten years.

SHEEP, BISON, etc. (Family *Bovidae*)

DESERT BIGHORN (*Ovis canadensis nelsoni*). Males with heavy horns which curl back, out and up; females with small horns. Sheep known to exist in the higher San Gabriel Mountains, tentatively assigned to this race.



WHALES

1. GRAY WHALE (35-40 feet). 2. PIKE WHALE (20-30 feet). 3. FINBACK WHALE (65 feet). 4. BLUE WHALE (60 to more than 100 feet). 5. SPERM WHALE (males 70-85 feet). 6. HUMPBACK WHALE (50 feet).

WHALE-LIKE MAMMALS (Order *Cetacea*)

There is much yet to be learned regarding the occurrence of mammals of this Order on the ocean off Los Angeles County. The species listed below may reasonably be expected. Those believed to be most common are marked with an asterisk.

GRAY WHALES (Family *Rhachianectidae*)

CALIFORNIA GRAY WHALE (*Rhachianectes glaucus*). Length 35-40 feet. Head small; *no dorsal fin*; blow-holes double.

FINBACK WHALES (Family *Balaenopteridae*)

Dorsal fin present; blow-holes double.

*COMMON FINBACK WHALE (*Balaenoptera physalus*). Length 65 feet or more. Head flat; body slender; small, curved dorsal fin in front of tail; *longitudinal furrows on throat and breast*. Dark-colored above, white below.

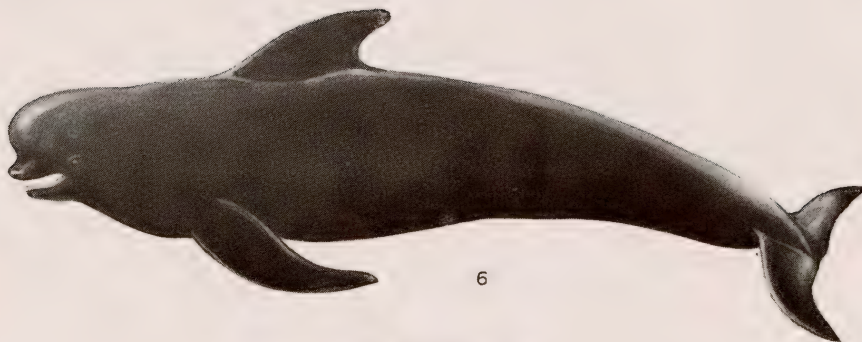
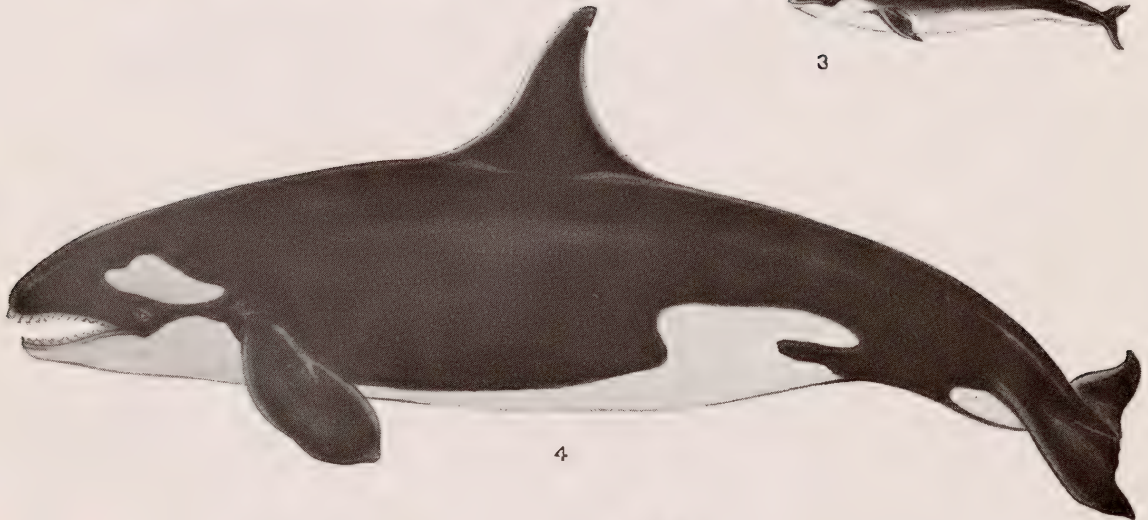
PIKE WHALE (*Balaenoptera acutorostrata*). Length 20-30 feet. *Upper jaw acutely narrowed anteriorly*. Dorsal fin quite high, with strongly curved tip.

BLUE WHALE or SULPHUR-BOTTOM (*Sibbaldus musculus*). *Largest* of whales (length 60 to more than 100 feet). Small, longitudinal furrows on throat; dorsal fin small and curved.

*HUMPBACK WHALE (*Megaptera novaeangliae*). Length up to 50 feet. *Thick-bodied*; dorsal fin small; *pectoral fins long and narrow*; lower jaw extending beyond upper.

SPERM WHALES (Family *Physeteridae*)

SPERM WHALE (*Physeter catodon*). Length of males 70-85 feet; females much smaller (25-30 ft.). *Head huge*, deep and square; *no dorsal fin*; lower jaw toothed. *Blow-hole single*, not paired as in foregoing species.



DOLPHINS, Etc.

1. COMMON DOLPHIN (7-8 feet). 2. N. RIGHT WHALE DOLPHIN (8 feet). 3. BAY PORPOISE (5-6 feet). 4. PACIFIC KILLER (20 feet). 5. COMMON GRAMPUS (10 feet). 6. SCAMMON BLACKFISH (15 feet).

PORPOISES, DOLPHINS, etc. (Family *Delphinidae*)

Small to medium-sized cetaceans *having teeth*.

*COMMON DOLPHIN (*Delphinus delphis*). Length 7-8 feet. *Beak pointed; dorsal fin large. Color variable, usually dark above, lighter below.*

NORTHERN RIGHT WHALE DOLPHIN (*Lissodelphis borealis*). Length 8 feet. *Beak pointed. No dorsal fin. Color black, except for white on breast and tip of lower jaw.*

*PACIFIC KILLER or ORCA (*Orcinus rectipinna*). Length about 20 feet. *Dorsal fin large. Color black, except for large white markings ventrally and on lower jaw.*

COMMON GRAMPUS (*Grampus griseus*). Length about 10 feet. *Nose blunt; dorsal fin high and slender. Color, mottled slate-gray, irregularly streaked.*

*SCAMMON BLACKFISH (*Globicephala scammoni*). Length 15 feet. *Nose blunt; dorsal fin shorter than in last two species, and farther forward. Color black.*

*BAY PORPOISE (*Phocaena phocaena*). Length 5-6 feet. *Nose not pointed. Above, slaty black; below, lighter; color never in spots.*

LOS ANGELES COUNTY MUSEUM SCIENCE SERIES

- NO. 1 CHESTER STOCK—Rancho La Brea. A record of Pleistocene Life in California. Paleontology publ. No. 1, 82 pp., 27 figs. in text, 1930. (Out of print.)
- NO. 2 CHESTER STOCK—Quaternary Antelope Remains from a Second Cave Deposit in the Organ Mountains, New Mexico. Paleontology publ. No. 2, 18 pp., 3 figs. in text, 1930.
- NO. 3 CHESTER STOCK—A Further Study of the Quaternary Antelopes of Shelter Cave, New Mexico. Paleontology publ. No. 3, 45 pp., 11 figs. in text, 3 pls., 1932.
- NO. 4 CHESTER STOCK—Rancho La Brea. A Record of Pleistocene Life in California (revised edition). Paleontology publ. No. 4, 73 pp., 29 figs. in text, 1942.
- NO. 5 GEORGE WILLETT—Common Birds of the Los Angeles County Coast. Zoology publ. No. 1, 39 pp., illus., 1942.
- NO. 6 GEORGE WILLETT—Common Birds of the Los Angeles County Mountains, Zoology publ. No. 2, 40 pp., illus., 1943.
- NO. 7 GEORGE WILLETT—The Birds of the Urban Districts of Los Angeles County, No. 1. Zoology publ. No. 3, 40 pp., illus., 1943.
- NO. 8 CHESTER STOCK and HILDEGARDE HOWARD—The Ascent of Equus. A Story of the Origin and Development of the Horse. Paleontology publ. No. 5, 38 pp., 15 figs. in text, 1944.
- NO. 9 GEORGE WILLETT—Mammals of Los Angeles County, California. Zoology publ. No. 4, 34 pp., illus., 1944.

